REMARKS

Status of the Claims

Claims 1 and 3-15 are now present in this application. Claim 1 is independent.

Claim 1 has been amended and claims 13-15 have been added.

Supports for Amended Claim 1 and New Claims 13-15

Amended claim 1 is supported by at least the Examples of the present specification.

Also, new dependent claims 13 and 14 are supported by the present specification, in particular, Tables 1-4. The lowering ratio (%) calculation is discussed below. More specifically, a specific polysaccharide powder having an average particle size of more than 20 μm and not being subjected to jet or freeze pulverization is compared with a corresponding (inventive) polysaccharide powder having an average particle size of 20 μm or less obtained by subjecting it to jet or freeze pulverization. For example, in Table 1, Inventive Product 1 (guar gum: 18.79 μm) is compared with Comparative Product 1 (guar gum: 51.35 μm). Thus, an exact comparison is conducted by comparing the same kinds of polysaccharides. Accordingly, the lowering ratio (%) of oil absorption is appropriately calculated as follows:

[(Oil content (% by weight) of Comparative Product — Oil content (% by weight) of Inventive Product) / Oil content (% by weight) of Comparative Product] x 100 %,

wherein the Inventive Product has an average particle size of 20 μm or less and is obtained by jet pulverization or freeze pulverization and the Comparative Product has an average particle size of more than 20 μm is not subjected to such jet pulverization or freeze pulverization. Thus calculated results are shown in the following table.

	Inventive Product	Comparative Product	Lowering Ratio (%)
Table 1			
Inventive Preduct 1/Comparative Product 1	23.3	30.8	24.4
Inventive Product 2/Comparative Product 2	21.2	29.2	27.4
Inventive Product 3/Comparative Product 3	20.1	27.5	26.9
Table 2			
Inventive Product 4/Comparative Product 5	14.5	22.3	35.0
Inventive Product 5/Comparative Product 6	13.7	21.6	36.6
Table 3			
Inventive Product 7/Comparative Product 8	19.5	28.1	30.6
Inventive Product 8/Comparative Product 9	20.4	27.8	26.6
Table 4			
Inventive Product 9/Comparative Product 11	34.5	40.5	14.8
Inventive Product 10/Comparative Product 12	32.4	38.9	16.7
Inventive Product 11/Comparative Product 13	30.8	37.1	17.0

Further, claim 15 is supported by the Tables and page 10, lines 1-10 of the present specification.

Thus, no new matter has been added. Reconsideration of this application, as amended, is respectfully requested.

Interview

Applicants wish to thank the Examiner and the Primary Examiner for the courtesies extended to Applicants' representative during the personal interview which was conducted on March 16, 2010. An Examiner Interview Summary was made of record as Paper No. 20100311. During the interview, Applicants' representative explained the distinctions of the invention for the benefit of the Examiners. Also, proposed amendments to the claims were discussed to overcome the prior art rejections of record. The claims have been amended in the manner discussed during the interview, and are believed to place the application into condition for allowance.

Accordingly, reconsideration and allowance of the present application are respectfully requested.

Rejection Under 35 U.S.C. § 103(a)

Claims 1-12 are rejected under 35 U.S.C 35 stand rejected under 35 U.S.C. § 103(a) as being obvious over Takahashi (US 2002/0001659 A1) in view of Krawczyk (US 6025007). This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

While not conceding the appropriateness of the Examiner's rejection, but merely to advance prosecution of the instant application, Applicants respectfully submit that claim 1 has been amended to further emphasize between the present invention and the cited art.

The Present Invention

Claim 1 of the present invention is directed to a composition for a deep-fried food, comprising: a polysaccharide powder having an average particle size of 20 μm or less, wherein the polysaccharide is selected from the group consisting of guar gum, pectin, xanthane gum, alginic acid and carboxymethyl cellulose, and the polysaccharide powder is obtained by subjecting the polysaccharide to jet pulverization or freeze pulverization, wherein the composition imparts to deep fried food, reduced oil absorption, increased mouthfeel and increased taste as compared to a composition comprising a polysaccharide powder having an average particle size of more than 20 μm and not being subjected to jet pulverization or freeze pulverization.

In the deep-fried food field, a large amount of oil absorption can occur during frying. Also, due to such oil absorption, mouthfeel and taste are lowered and health is negatively influenced. Thus, oil absorption in deep-fried foods should be necessarily controlled. In other words, low oil absorption is important in deep-fried foods. The present inventors have presented a solution by providing a pulverized polysaccharide powder having an average particle size of 20

μm or less. When using such a powder, oil absorption in deep-fried foods during cooking is remarkably reduced by at least approximately 14.8%. This effect is proven by the Tables of the specification and the Declaration filed on July 17, 2009 wherein the present polysaccharide powder having an average particle size of 20 μm or less under jet pulverization or freeze pulverization reveals unexpectedly superior results.

Also, the effects of the present invention are also proven by the Declaration filed on September 18, 2009, wherein the present invention using alginic acid shows unexpectedly superior results compared to the cited art using alginic acid ester.

Distinctions over the Cited Art

(1) The Examiner states at page 3 of the Office Action that

> It is noted that whereas claim 1 is product claim, the newly added limitation of "polysaccharide powder is obtained by subjecting the polysaccharide to jet pulverization or freeze pulverization" is a process limitation. As such claim 1 is a product-by-process claim. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process. In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985).

With regard to this statement, Applicants respectfully direct the Examiner's attention to the case of Ex parte Smith, 123 USPQ 450 (BPAI 1958). One independent claim (claim 38) in this case recites a sterile hemostatic material defined by "preparation methods (product-by-process)" and "new physical characteristics". More specifically, claim 38 of this case reads:

> A sterile hemostatic material selected from the class consisting of a partially hydrated high molecular weight cellulose glycollic acid ether and a cellulose sulphuric acid ester non-toxic and non-irritating in animal tissue, said material being in solid form dried to the extent that it does not quickly shrivel or dissolve in water at 100°F. but insufficient to become brittle, said material having the physical characteristics of substantial capillary porosity so that it

> is quickly wet by, absorbs and coagulates the blood of mammals, said product being substantially free of material which quickly dissolves in water on contact and contains no substantial amount of material which is not absorbed in the tissues within a thirty-day period.

It is noted that the first underlined part of claim 38 relates to a product-by-process limitation while the second underlined part of claim 38 relates to a physical property limitation. The Examiner in this case rejected claim 38 for the reason that such claim differs from the prior art only by statement of function. That is, the Examiner did not place patentable weight on the preparation method step. However, USPTO Board of Patent Appeals reversed the Examiner's rejection by stating that ***defining materials by not only novel properties but preparation for imparting such properties to the materials is patentable***. Also, notably, the independent claim 38 of this case does not quantitatively, but rather qualitatively defines the physical characteristics of the claimed materials.

From such case law, it is evident that if a product-by-process limitation imparts the substantial properties to the product, their combined limitations are patentable and also the properties are not required to be expressed in a quantitative manner.

This case law is relevant to the present invention. The present invention includes a polysaccharide having a specific particle size and produced by jet or freeze pulverization treatment. As shown in the Tables of the specification and filed Declaration of July 17, 2009, it is clear that the product-by-process limitation imparts reduced oil absorption, increased mouthfeel and increased taste as compared to a composition comprising a polysaccharide powder having an average particle size of more than 20 μm and not being subjected to jet pulverization or freeze pulverization (emphasis added). Therefore, Applicants respectfully submit that the presently claimed limitations of product-by-process and imparting properties are patentably distinct from the cited art.

Nevertheless, Applicants have added new dependent claims 13 and 14 reciting a quantitative reduction ratio (5) of oil absorption, respectively.

By way of the present submission, it is evident that the present invention is patentably distinct from the cited art in terms of structure and effects of the composition.

(2) Takahashi and Krawczky fail to disclose or suggest that the polysaccharide powder is obtained by subjecting the polysaccharide to jet pulverization or freeze pulverization and advantageous properties of the powder are imparted from such treatment. Therefore, the present invention is patentably distinct from the cited art individually or in combination.

(3) As explained in the Reply of September 18, 2009, Takahashi '659 relates to an oil absorption retarder comprising alginic ester as a main component. See paragraphs [0009]-[0016] and Examples 3, 5 and 6 of Takahashi '659. Although Takahashi '675 discloses that addition of polysaccharide is allowed wherein polysachharide includes alginic acid, sodium alginate, pectin, CMC, carrageenan, guar gum, …., such polysaccharides are merely suggested. In fact, the Examples of Takahashi '675 do not include such polysaccharides in the retarder. Rather, Takahashi '659 focuses on "alginic ester" as a retarder.

In the filed Declaration of September 18, 2009, powders of alginic acid (the present invention, hereinafter "Powder A" or "Product A") and alginic acid ester (Takahashi '659, hereinafter "Powder A" or "Product AE") were compared. The present invention using alginic acid showed a 12.8% oil content while Takahash using alginic acid ester showed a 20.2% oil content. It is evident that the oil content of Product A of the present invention was significantly lower than Product AE, corresponding to Takahashi '659. Further, the present invention provided superior effects in terms of mouthfeel and taste as compared to Takahashi.

If Takahashi would recognize the superior effects of the claimed arginic acid, Takahashi would certainly have used this compound as a main component of retarder. However, since Takahashi does not have such recognition, Takahashi remains silent about the use of arginic acid as a main component of retarder. See the Examples of Takahashi.

Consequently, the filed Declaration of September 18, 2009 shows that the claimed polysaccharide leads to unexpected and superior results, which is objective advantageous

evidence of the non-obviousness of the present invention. Therefore, reconsideration and withdrawal of the §103(a) rejection are respectfully requested.

Conclusion

In view of the above remarks, Applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Craig A. McRobbie No. 42,874 at the telephone number of the undersigned below to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Director is hereby authorized in this, concurrent, and future replies to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

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Respectfully submitted,

By _____

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